Invention Title: Multi-Axes Tool Compensation – 3D and 5-axis real-time interactive tool compensation inside the CNC machine tool controller.

Inventor: Gary John Corey Application No. 10/079,309 Inventor's Phone No.: (951) 674-8100

| Size                       | Horz                             |                                    | Parame<br>Height                      |  | Custom1   | Custom2 |          | Tool D<br>Comer | efinition<br>Bottom | s (Solid<br>Side | Mode (<br>Lenath | only).<br>Type |
|----------------------------|----------------------------------|------------------------------------|---------------------------------------|--|-----------|---------|----------|-----------------|---------------------|------------------|------------------|----------------|
|                            |                                  |                                    |                                       |  | al de la  | 被探察     |          | radius          |                     | angle :          |                  | b.             |
| 0.25                       | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0       | 4        | 0.0             | 0.0                 | 0.0              | 3.0              | 0              |
| 2, 0.0                     | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0 j     |          | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| 3 0.0                      | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0       |          | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| 4-2 0.0                    | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0 4     | Sec. 1.  | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| 5 0.0                      | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0       | Š        | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| 6.00                       | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0       | Same?    | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| 7. 0.0                     | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0       | 2        | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| e:4[0.0                    | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0       | 2014     | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| 9. O.O                     | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0       | Ę.       | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| 0.0                        | 0.0                              | 0.0                                | 0.0                                   | 0.0                                    | 0         | 0       | X-5 6-30 | 0.0             | 0.0                 | 0.0              | 0.0              | 0              |
| 0.0 10.0                   |                                  | Machine  4  0 0 0                  | 05<br>0 0 00<br>00 000                | Sept. 1965.50                          | 8<br>10.0 |         |          |                 |                     |                  |                  |                |
|                            | \ G55 →                          |                                    |                                       | 3658 →<br>0.0                          | 0.0       |         |          |                 |                     |                  | e C = 41±6 g     |                |
| A COL MANAGEMENT           | re und ber bereit                |                                    | TWO THE TWO                           | The same recent the section            | 0.0       | 2 × 1   |          |                 |                     |                  |                  |                |
| A. Anten die dareite ball. | A TO A TANK BATTON OF A PARTY    | The Marie Sand                     | Transference of                       | The state of the state of the state of | 0.0       |         |          |                 | 1175                |                  |                  |                |
| Sime ware, believe say     | ALL SAME AFT L'AN MALAGE         | A                                  | TE WAY - TANKER                       | ENTERS THE PETROP                      | 0.0       |         | 學        |                 |                     |                  |                  |                |
| Street de Comp             | and and a beautiful and a second | the sales of the first time of the | Emmanuel Street                       | THE COMPTER                            | 0.0       |         |          |                 |                     |                  |                  |                |
| Marian and selection is    | THE CALL OF LAND AND ADDRESS OF  | A TIME WALLE                       | Link halls of X. San Lord Array lange | PORTER OF PROPERTY OF                  | 0.0       |         |          |                 |                     |                  |                  |                |
| the same of the same of    | ACTUAL TO STATE OF THE           | مانعم لاملادناء للاست              | welling in Line at 1                  | CHAMICANT OF G                         | 0.0       |         |          |                 |                     |                  | 2014             |                |
| 0.0                        |                                  |                                    |                                       |  |           |         |          |                 |                     |                  |                  |                |

FIG 1.

Inventor: Gary John Corey Application No. 10/079,309 Inventor's Phone No.: (951) 674-8100

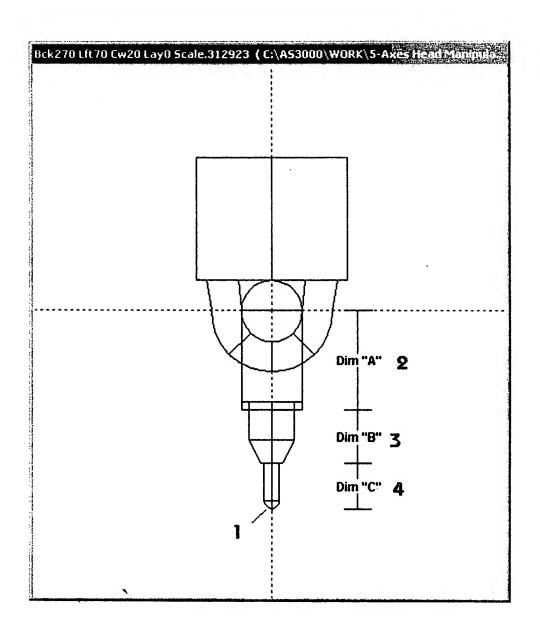


FIG 2.

Inventor: Gary John Corey Application No. 10/079,309 Inventor's Phone No.: (951) 674-8100

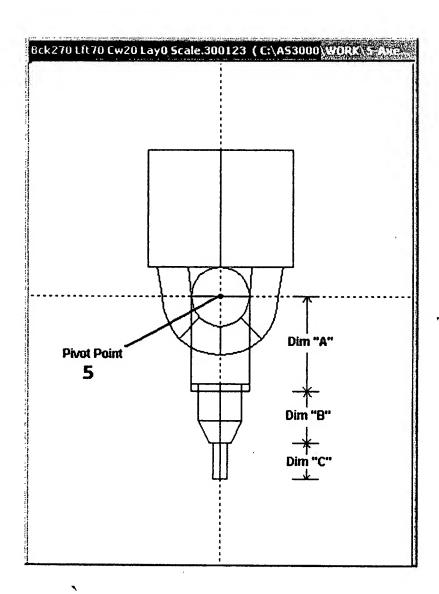


FIG 3.

Inventor: Gary John Corey Application No. 10/079,309 Inventor's Phone No.: (951) 674-8100

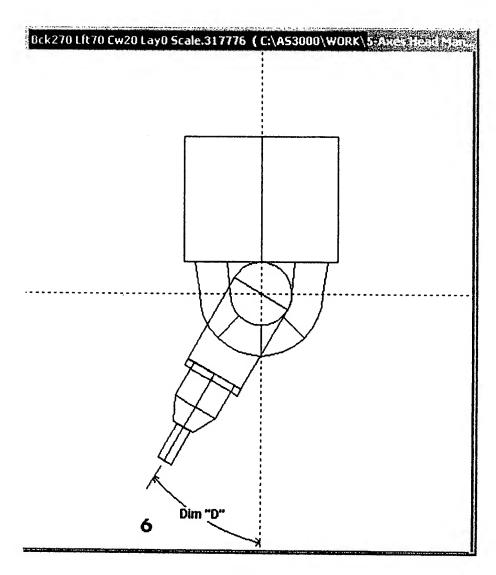


FIG 4.

Inventor: Gary John Corey Application No. 10/079,309 Inventor's Phone No.: (951) 674-8100

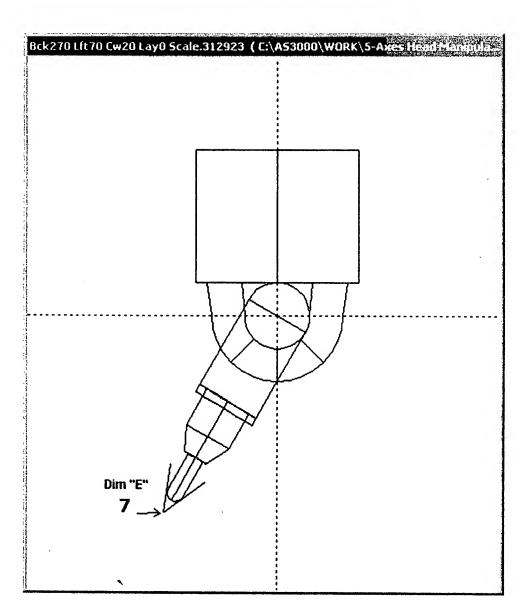


FIG 5.

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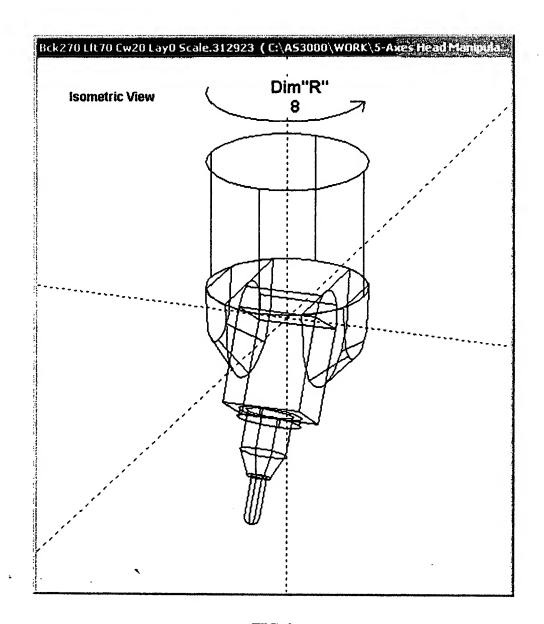
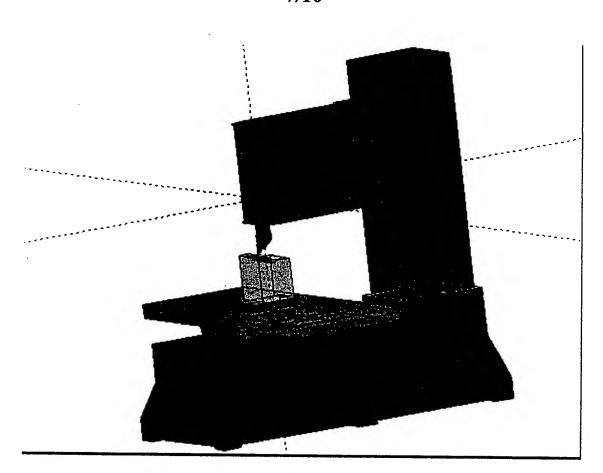


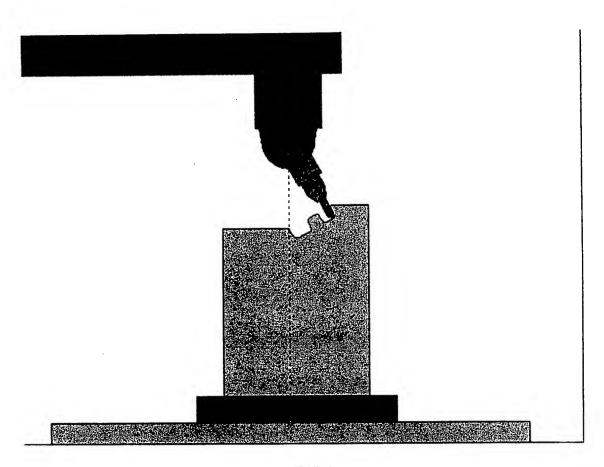
FIG 6.

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**FIG 7.** 

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**FIG 8.** 

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N10 T01 M6
N20 G90 S200 M3
N30 G0 A270. B0
N40 X0 Y-21. Z0 M8
N50 Z20.5
N60 G1 Y-10.933 Z17.9365 A270. B-30. F10.
N70 Y-3.2465 Z10.75 A270. B-60.
N80 Y0 Z.5 A270. B-90.
N90 Y-3.2465 Z10.75 A90. B-60.
N100 Y-10.933 Z17.9365 A90. B-30.
N110 Y-21. Z20.5 A90. B0
N120 G1 Z0
N130 GO AO BO
N140 X0 Y-21. ZO S200 F10.
N150 G1 Z20.5
N160 G1 Y-10.9332 Z17.9367 A0 B-29.9993 F10.
N170 Y-3.2463 Z10.7498 A0 B-60.0007
N180 YO Z.5 AO B-90.
N190 Y-3.2465 Z10.75 A180. B-60.
N200 Y-10.933 Z17.9365 A180. B-30.
N210 Y-21. Z20.5 A180. B0
N220 Z0
N230 GO AO BO
N240 M30
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FIG 9.